

Attorney Docket No. 1293.1925

### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Jae-seong Shim et al.

Application No.: 10/667,670

Group Art Unit: 2819

Filed: September 23, 2003 Examiner: Patrick G. Wamsley

DATA MODULATING METHOD AND APPARATUS, DATA DEMODULATING METHOD For:

AND APPARATUS, AND CODE ARRANGING METHOD

#### INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents PO Box 1450 Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure provisions of 37 CFR § 1.56, there is hereby provided certain information which the Examiner may consider material to the examination of the subject U.S. patent application. It is requested that the Examiner make this information of record if it is deemed material to the examination of the subject application.

- 1. Enclosures accompanying this Information Disclosure Statement are:
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  - English language translation (Abstract Only) attached to non-English 1d. 🛛 language publications as indicated on the attached Form PTO-1449.
  - 1e. 🔯 Explanations of Relevancy of References (ATTACHMENT 1(e), hereto) for providing a concise explanation of non-English publications.
  - List of Copending Applications (ATTACHMENT 1(f), hereto). 1f.
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- 3. No admission is made that the information cited in this Statement is, or is considered to be, material to patentability nor a representation that a search has been made (other than search report(s) from a counterpart foreign application or a PCT International Search Report, if submitted herewith). 37 CFR §§ 1.97(g) and (h).

4. The Commissioner is authorized to credit any overpayment or charge any additional fee required under 37 CFR § 1.17 for this Information Disclosure Statement to Deposit Account No. 503333.

Respectfully submitted,

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| U.S. DEPARTMENT OF COMMERCE | ATTORNEY DOCKET NO.         | APPLICATION NO.   |
|-----------------------------|-----------------------------|---|
|                             | ,                           | 10/667,670  |
|                             | FIRST NAMED INVENTOR        | · · · · · · · · · · · · · · · · · · ·   |
| ENCES CITED BY APPLICANT    | ਘੁ\ Jae-seong Shim et al.   |   |
| APR I                       | FILING DATE                 | GROUP ART UNIT  |
| everal sneets if necessary) | September 23, 2003          | 2819  |
|                             | PATENT AND TRADEMARK OFFICE | PATENT AND TRADEMARK OFFICE  1293.1925  FIRST NAMED INVENTOR  Jae-seong Shim et al. |

## U.S. PATENT DOCUMENTS

| *EXAMINER<br>INITIAL |    | DOCUMENT<br>NO. | DATE    | NAME          | CLASS | SUB-<br>CLASS | FILING<br>DATE |
|----------------------|----|-----------------|---------|---------------|-------|---------------|----------------|
|                      | AA | 6,268,810 B1    | 07/2001 | Shim et al.   |       |               |                |
|                      | AB | 6,281,815 B1    | 08/2001 | Shim et al.   |       |               |                |
|                      | AC | 2002/0060634 A1 | 05/2002 | Shim          |       |               |                |
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|                      | AE | 6,781,527 B2    | 08/2004 | Shim et al.   |       |               |                |
|                      | AF |                 |         |               |       |               |                |

### **FOREIGN PATENT DOCUMENTS**

|    | DOCUMENT<br>NO. | DATE    | COUNTRY | TRANSLATION<br>YES NO | ABSTRACT |
|----|-----------------|---------|---------|-----------------------|----------|
| AG | WO98/17005      | 04/1998 | WIPO    |                       | Х        |
| АН | JP 2000-286710  | 10/2000 | Japan   |                       | Х        |
| Al | JP 2000-339871  | 12/2000 | Japan   |                       | Х        |
| AJ | JP 2002-135121  | 05/2002 | Japan   |                       | Х        |
| AK | JP 2003-032120  | 01/2003 | Japan   |                       | X        |
| AL |                 |         |         |                       |          |

| OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.) |    |   |  | ATION<br>NO |
|---|----|---|--|-------------|
|   | АМ | Japanese Office Action issued in Japanese Patent Application No. 2003-336173 on January 10, 2006. |  | :           |

| EXAMINER | DATE CONSIDERED |
|----------|-----------------|
|          |                 |
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



# EXPLANATIONS OF RELEVANCY OF REFERENCES

|                       | MIVIENT 1(e)    |
|-----------------------|-----------------|
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| FIRST NAMED INVENTOR  |                 |
| Jae-seong Shim et al. |                 |
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- \* Reference AA (U.S. Patent No. 6,268,810 B1) corresponds to reference AH (Japanese Patent Publication No. 2000-286710).
- \* Reference AB (U.S. Patent No. 6,281,815 B1) corresponds to reference AI (Japanese Patent Publication No. 2000-339871).
- \* Reference AC (U.S. Patent Publication No. 2002/0060634 A1) corresponds to reference AJ (Japanese Patent Publication No. 2002-135121).
- \* Reference AD (U.S. Patent No. 6,654,425 B1) corresponds to reference AG (WIPO Publication No. 98/17005).
- \* Reference AE (U.S. Patent No. 6,781,527 B2) corresponds to reference AK (Japanese Patent Publication No. JP 2003-032120).